

2018 Tuberculosis Annual Report

San Mateo County Health System Tuberculosis Control Program

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Tuberculosis in San Mateo County

- ⇒ 61 new active cases
- ⇒ Incidence: 7.9 cases / 100,000 population
- ⇒ SMC ranked 5th highest incidence in CA
- ⇒ TB-associated deaths: 0
- ⇒ No links among US born cases

Cases by Origin

- ⇒ US Born: 2
- ⇒ Foreign-Born: 59

Country	Cases
Philippines	29
China	8
India	3
Peru	3
Burma	2
Pakistan	2
El Salvador	1
Guatemala	1
Hong Kong	1
Indonesia	1
Korea	1
Macau	1
Mexico	1
Mongolia	1
Nicaragua	1
Romania	1
Vietnam	1
Western Samoa	1

Foreign-born origins of TB cases

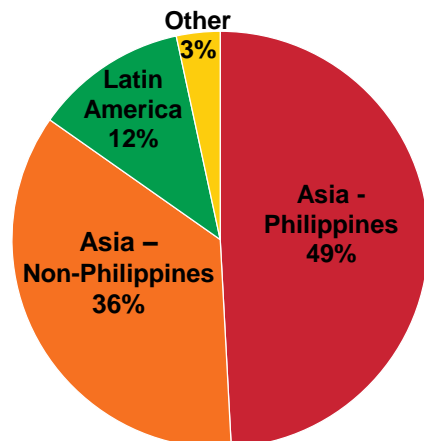


Figure 1. Almost half of foreign-born cases of active TB were in individuals born in the Philippines.

Incidence Trends

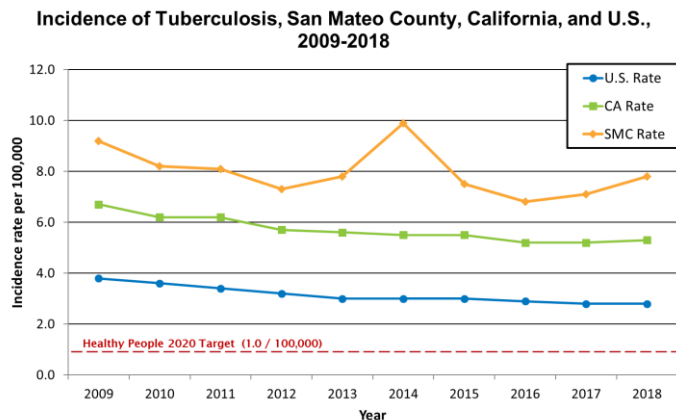
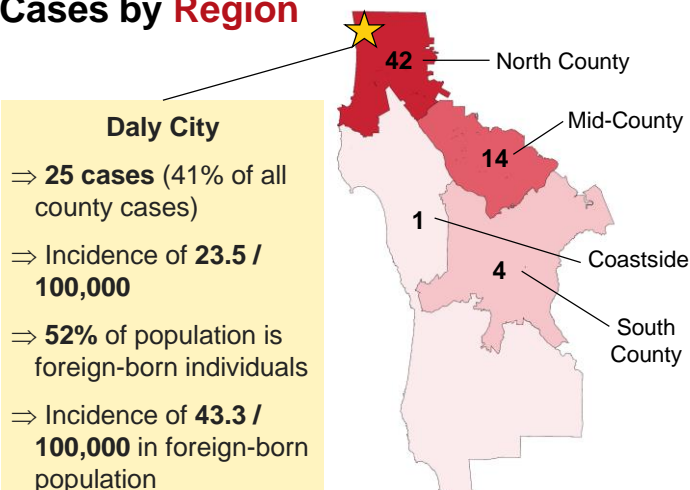


Figure 2. Incidence of TB in San Mateo County remains above the California and U.S. incidence rates.

Cases by Region



- ⇒ 25 cases (41% of all county cases)
- ⇒ Incidence of 23.5 / 100,000
- ⇒ 52% of population is foreign-born individuals
- ⇒ Incidence of 43.3 / 100,000 in foreign-born population

Patient Demographics

Tuberculosis Cases and Incidence Rates, 2014-2018		2018 cases	2014-2018 Annual average number of cases	2014-2018 Average Incidence Rate
Sex	Male	34	35.2	9.3
	Female	27	24.6	6.3
Age Group	0-4 yrs	1	0.6	1.4*
	5-14 yrs	0	0.6	0.6*
	15-24 yrs	4	3.0	3.7*
	25-44 yrs	12	15.0	7.2
	45-64 yrs	24	19.0	8.7
	65+ yrs	20	21.6	17.5
Race/Ethnicity	Asian	51	44.6	22.8
	Hispanic/Latino	7	10.0	5.0
	Black	1	0.4	2.1*
	Pacific Islander	1	1.6	14.3*
	White	1	3.2	1.0*

*These values are based on calculations using few cases of disease. Caution should be observed when interpreting rates based on few events and/or small populations

Table 1. Based on 5-year average incidences, the groups most affected by TB in San Mateo County are: males, individuals 65 years and older, and Asians.

Demographic Highlights

- ⇒ Median age: 56.5 years old
- ⇒ Age range: 0-95 years old
- ⇒ 1 pediatric case (0-14 years old)

Social Risk Factors

(within past 12 months)

- ⇒ Homeless: 0
- ⇒ Correctional facility: 0
- ⇒ Long-term care housing: 1
- ⇒ Substance abuse (including alcohol): 2

Clinical Characteristics

Clinical Characteristics of TB Cases, 2018		Number of cases	Percent
Site of disease	Pulmonary only	44	72.1%
	Extrapulmonary only	13	21.3%
	Both pulmonary and extrapulmonary	4	6.6%
Culture status (sputum cultures from cases with any pulmonary infection) <i>n=47*</i>	Culture Positive	33	70.2%
	Clinical Case	14	29.8%
Sputum smear status (for cases with positive sputum cultures) <i>n=33</i>	Positive	12	36.4%
	Negative	21	63.6%
Comorbidities	HIV/AIDS	1	1.8%**
	Diabetes mellitus	21	34.4%
	End-stage renal disease	2	3.3%
	Other immunosuppression	6	9.8%

*One case (pulmonary only) was based on a lung culture, no sputum culture was done; this case is not included in this total; **Of 57 cases with known HIV status

Table 2. Over 60% of culture-positive sputum samples were smear-negative. The most common reported comorbidity was diabetes mellitus.

TB Control's Work Load

The TB Control team followed up with **77 potential cases** and **536 contacts** in 2018.

Of the 58 active cases with treatment monitored by the TB Control team, directly observed therapy (DOT) was performed with **29 cases**, and video observed therapy (VOT) was performed with an additional **29 cases**.

B-notifications

The CDC sends B notifications to health departments as follow-up to the screening mandated by U.S. immigration law. In 2018, San Mateo County received **237 B notifications**.

Microbiological Characteristics

Microbiological Characteristics of TB Cases, 2018		Number of cases	Percent
Culture Status (All)	Culture Positive	47	77.0%
	Clinical Case	14	23.0%
Drug Susceptibility (Culture positive only)	Susceptible	37	78.7%
	Resistant	10	21.3%
Anti-TB Drug Resistance	INH Only	5	-
	MDR (INH & RIF)	1	-
	INH+Streptomycin	1	-
	PZA	3	-

Table 3. Over 75% of TB cases were culture positive; 78.7% of culture-positive cases were drug susceptible. Only 10 cases were drug resistant, including one multi-drug resistant (MDR) case.

2018 in Summary

2018 saw an 11.3% increase in incidence of TB in San Mateo County (7.9 cases / 100,000 persons) compared to 2017 (7.1 cases / 100,000 persons). TB incidence in California (5.3 cases / 100,000 persons), and the US (2.8 cases / 100,000 persons) remained about the same over the past three years. Compared to 2009 incidence (9.2 cases / 100,000 persons), San Mateo County has experienced a 14.1% decrease in TB incidence. However, incidences are still above the Healthy People 2020 Target (1.0 cases / 100,000 persons).

The rate of decline in TB incidence in the US is slowing, making it harder to achieve the US goal of TB elimination, defined as less than 1 case per million persons. To make progress towards this goal, there needs to be an intensive effort to screen for latent TB infection (LTBI) and to treat LTBI to prevent future cases of active TB. There are shorter courses of treatment available now for LTBI, which makes it easier for persons to comply and complete treatment.

LTBI should be treated in patients of all ages, as even older patients are at risk for progression to active TB. Of the twenty TB cases 65 years and older in San Mateo County in 2018, nine (45%) were in individuals 80 years and older. Treating LTBI even when diagnosed in older patients will help reduce the risk of development of active TB.

The 2 cases in US born individuals were not epidemiologically linked. We have no evidence of ongoing local transmission of TB. However, without continued aggressive vigilance and control measures, that could easily change. The highest number of cases occurred in Daly City. As expected, the majority of cases were foreign-born, with just under half being foreign-born in the Philippines. Older age groups continued to bear the highest burden of disease in San Mateo County. Persons with diabetes are three times more likely to progress from LTBI to active TB than persons without diabetes. Diabetes mellitus (DM) continued to be the most common co-morbidity in persons with TB and was present in over one third of cases in 2018.

For further information

Call **650-573-2346** Visit smchealth.org/TB

Additional resources:

- California Department of Public Health: cdph.ca.gov/Programs/CID/DCDC/Pages/TBCB.aspx
- Centers for Disease Control: cdc.gov/tb

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Data sources: CA Dept Public Health (2018 CA and US incidence rates, from 'TB in California: 2018 Snapshot'); CA Dept of Finance (population estimates for incidence calculations, from Jan 2018 P2 data projections); US Census Bureau (city-level population estimates, from American Community Survey 5-Year Estimates)



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